

REMARKS

Claims 1 through 20 are pending in this application. Claims 3 and 8 are amended in several particulars for purposes of clarity in accordance with current Office policy, to assist the examiner and to expedite compact prosecution of this application. The Applicant appreciates the Examiner's indication of allowability concerning claims 11, 13-14, and 16.

I. SPECIFICATION

In order to assist the Examiner and to expedite compact prosecution of this application, a few corrections were made in the specification in order to correlate with the rest of the specification and drawings.

In paragraph [0055], first sentence, "sustain pulse voltage" was corrected to --scan pulse voltage-- since it is applied to the scan electrode common line YY_1 at t_3 according to Figs. 3A and 3B which show the scan pulse at t_3 .

In paragraph [0056], first sentence, "the ground voltage" was corrected to --sustain discharge voltage-- since it is applied to the scan electrode common lines YY_1 and YY_2 at t_4 according to Figs. 3A and 3B which show the sustain discharge at t_4 .

Additionally in paragraph [0056], first sentence, "the sustain discharge voltage" was corrected to --the ground voltage-- because it is applied to the sustain common lines XX_1 and XX_2 at t_4 according to Figs. 3A, 3B and the remaining specification.

II. Claim Objections/ Minor Informalities

The Examiner stated that Claims 3 and 8 are objected to because of the following informalities:

Claim 3, line 1, "the" and "of" should be deleted;

Claim 8, line 1, "the" and "of" should be deleted; and

Claim 8, line 3, "the" and "of" should be deleted.

Respectfully, the use of "the" properly refers back to a previous recitation of the subject and therefore, the use of "of" is grammatically correct. However, since the suggested changes makes no substantive change to the subject matter and are only for formality reasons, claims 3 and 8 were amended according to the Examiner's suggestion.

III. Claim Rejections - 35 USC § 112 (second paragraph)

Claims 1-8 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner stated that with respect to claim 1, the recitation "after applying a second voltage to the first electrodes ... accommodating an address erasure" in lines 8-12 renders the claim indefinite since it is not understood how part of the first voltage that is applied to the first electrodes is removed, and how the third and fourth voltages are applied before applying the first voltage. The Examiner stated similar reasoning for rejection of claims 17 and 18.

However, looking at lines 9-10, it can be seen that third and fourth voltages are applied to the second electrodes and in the sentence structure, the first voltage is also referring to the second electrodes as it clearly states “applying third and fourth voltages to the second electrodes and the data electrodes, respectively, before applying the first voltage.” The first portion of the clause is referring to the first electrodes as explicitly stated in lines 8-9, “after applying a second voltage to the first electrodes or removing part of the first voltage applied to the first electrodes”. Therefore, it is clear how the part of the first voltage that is applied to the first electrodes is removed and how the third and fourth voltages are applied before applying the first voltage since as shown above the removal of part of the first voltage is referring to the first electrodes while how the third and fourth voltages are applied before applying the first voltage is referring to the second electrodes.

Therefore, the rejections for claims 1-8 and 17-20 must be removed, and the Examiner must examine the claims on the merits.

IV. Claim Rejections - 35 USC § 102

No claim is anticipated under 35 U.S.C. §102 (b) unless all of the elements are found in exactly the same situation and united in the same way in a single prior art reference. As mentioned in the **MPEP §2131**, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Every element must be literally present, arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868

F.2d 1226, 9 USPQ2d 1913, 1920 (CAFC 1989). The identical invention must be shown in as complete detail as is contained in the patent claim. *Id.*, “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970), and MPEP 2143.03.

A. Claims 9-10, 12, 15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Shino et al. (U.S. Patent No. 6,320,326). The Applicant respectfully traverses.

The Examiner stated that with respect to claim 9, Shino et al. discloses, in Figs. 22-23, an apparatus for driving a plasma display panel, which includes a plurality of first [SCN1,..., SCNM] and second electrodes [SUS1, ..., SUSM] arranged in pairs, a plurality of data electrodes [D1, ..., DN] formed normal to the first and second electrodes (see Fig. 22), and a plurality of sub-fields for one TV field to display a multi-gradation; the apparatus comprises (1) a first driver [2] for applying a voltage for sustain discharge to the first electrodes by periods (see Fig. 23), and applying a first voltage to the first electrodes of cells selected for erasure of the sustain discharge or removing the voltage for sustain discharge to erase the sustain discharge (see col. 2, lines 51-55 and col. 5, lines 34-37), (2) a second driver [3] for applying the voltage for sustain discharge to the second electrodes, and applying a second voltage to the second electrodes of cells selected for erasure of the sustain discharge (see col. 5, lines 10-37), and (3) a third driver [4] for applying a third voltage to the data electrodes of cells selected for erasure of the sustain discharge (see col. 4, line 57 - col. 5, line 4).

However, Shino does not disclose the first and second drivers as claimed in the present

invention. First of all, Shino in the cited text of col. 2, lines 51-55 and col. 5, lines 34-37 describes a sustain electrode drive circuit 3a, 3b, and not the scan electrode drive circuit [2] as mentioned by the examiner for the first driver. Moreover, the second driver described by the examiner in col. 5, lines 10-37 is also the sustain electrode drive circuit [3].

With respect to claim 10, the Examiner stated that Fig. 22 of Shino et al. shows the plural first and second electrodes arranged in pairs are divided into j groups, each including i pairs of the first and second electrodes [SCN1, ..., SCNM; SUS1, ..., SUSM]; the plasma display panel further includes j first common lines [SCN1, SCNM] and i second common lines [SUS1, ..., SUSM] (see Fig. 22), wherein (i) the j first common lines are coupled independently to the j groups (to the scan drive circuit; see Fig. 22), (ii) the first electrodes of the one group are coupled in common to the first common line, and (iii) the i second electrodes of the same group are coupled independently to the i second common lines (see Fig. 22).

However, the lines disclosed in Shino are not coupled as the present invention. That is, comparing with the presently claimed invention, Shino does not have the same common lines as seen for example in figure 22 cited by the examiner of Shino and figure 2 of the present invention which supports claim 10. Specifically, Shino fails to disclose the j first common lines are coupled independently to the j groups, the first electrodes of the one group are coupled in common to the first common line, and the i second electrodes of the same group are coupled independently to the i second common lines as seen in the prior art cited in Shino of figure 22.

With respect to claim 12, the Examiner stated that Figs. 22-23 of Shino, et al. show that the second driver [3] applies the second voltage sequentially to the second common lines [SUS1, ..., SUSM] between successive sustain discharge voltage pulses applied to the second common lines.

First, however, the second common lines of Shino are not as shown in the present invention. Secondly, figure 23 does not disclose the second voltage being applied between successive sustain discharge pulses applied to the second common lines. For example, the timing diagrams of the present invention with respect to the claim language clearly show the difference between figure 23 of the prior art shown in Shino.

With respect to claim 15, the Examiner stated that Fig. 23 of Shino et al. shows that the first voltage is a ground voltage, the second voltage is a scan pulse voltage having a negative (-) value, and the third voltage is a data pulse voltage having a positive (+) value.

However, figure 23, or the rest of Shino does not disclose the first voltage being the ground voltage. Previously, the Examiner cited col. 2, lines 51-55 of Shino for the first voltage, but here, Shino describes the first voltage as being V_e as seen also in figure 23.

With respect to claim 17, the Examiner stated that as best understood, Shino et al. discloses, in Figs. 22-23, a plasma display panel comprising (1) inherent first and second substrates, (2) a plurality of first [SCN1, ..., SCNM] and second electrodes [SUS1, ..., SUSM] arranged in pairs, (3) a plurality of data electrodes [D1, ..., DN] arranged alternately with the first and second electrodes (see Fig. 22), (4) a first driver [2] for applying a first voltage to the first electrodes by periods (see

Fig. 23) to cause a sustain discharge, and applying a second voltage to the first electrodes of cells selected for erasure of the sustain discharge or removing the voltage for sustain discharge to erase the sustain discharge (see col. 2, lines 51-55 and col. 5, lines 34-37), (5) a second driver [3] for applying a third voltage to the second electrodes of cells selected for erasure of the sustain discharge (as best understood, this sustain discharge existed or accumulated before applying the first voltage), after applying the second voltage to the first electrodes (see col. 5, lines 10-37), and (6) a third driver [4] for applying a fourth voltage to the data electrodes of cells selected for erasure of the sustain discharge (see col. 4, line 57 - col. 5, line 4) (as best understood, this sustain discharge existed or accumulated before applying the first voltage), after applying the second voltage to the first electrodes or removing the first voltage from the first electrodes.

However, again, as shown above for claim 9, the sustain electrode driver circuit of Shino is referring to both the first and second drivers of the present invention. For example cited text col. 2, lines 51-55 and col. 5, lines 34-37 refer to the sustain electrode driver circuit 3 and so does the second driver applying the third voltage.

Moreover, Shino fails to disclose a second driver for applying a third voltage to the second electrodes of cells selected for erasure of the sustain discharge before applying the first voltage, after applying the second voltage to the first electrodes or removing the first voltage from the first electrodes. The above limitation does not occur after applying the second voltage to the first electrodes or removing the first voltage from the first electrodes or before the first voltage is applied to the second electrodes. For example, col. 5, lines 10-37 of Shino make no such disclosure.

V. Allowable Subject Matter

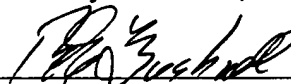
The Examiner stated that Claims 11, 13-14, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applicant appreciates the examiner's indication of allowability pertaining to claims 11, 13-14, and 16. In accordance with 37 C.F.R. § 1.111(b), the applicant respectfully requests that the examiner temporarily hold objections and requirements as to form in abeyance until the remarks and amendments in this Amendment are considered by the examiner.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

No fee is incurred by this Amendment. Should there be a deficiency in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



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